Assignment Questions

Information: The text pages that you are to study are provided at the beginning of the assignment questions.

ASSIGNMENT 1

Textbook Assignment: "Anatomy and Physiology," pages 1-1 to 1-48.

1-1. When the body is in the anatomical position, the thumbs point

1. medially
2. laterally
3. anteriorly
4. posteriorly

1-2. A person lying on his/her back is in what position?

1. Prone
2. Erect
3. Supine
4. Lateral recumbent

1-3. The physical and chemical breakdown of the food we eat is called

1. digestion
2. metabolism
3. anabolism
4. catabolism

1-4. The transfer of fluids across the plasma membrane of a cell from an area of lower concentration to an area of higher concentration is a process known as

1. infusion
2. diffusion
3. perfusion
4. osmosis

1-5. Homeostasis is defined as

1. control of bleeding
2. absorption, storage, and use of food products
3. self-regulated control of the body's internal environment
4. the power of voluntary movement

1-6. That portion of a cell containing all the genetic material important in the cell's reproduction is called the

1. plasma membrane
2. nucleus
3. cytoplasm
4. reticulated endothelium

1-7. What type of tissue is known as the lining tissue of the body?

1. Connective
2. Areolar
3. Sebaceous
4. Epithelial

1-8. The secretion of digestive fluids and the absorption of digested foods and liquids is the chief function of which tissue?

1. Columnar
2. Osseus
3. Sercus
4. Squamous

1-9. Because this tissue is continuous throughout the body, if an infection were allowed to spread, it could reach every area of the body by moving through which of the following tissues?

1. Areolar
2. Adipose
3. Osseous
4. Fibrous

1-10. Which of the following are the two most prominent mineral elements of bone?

1. Ossein and calcium
2. Phosphorus and calcium
3. Sodium and phosphorus
4. Periosteum and ossein

1-11. The bones of the wrist are classified as which of the following bones?

1. Long
2. Short
3. Flat
4. Irregular

1-12. Bones of the cranium include which of the following?

1. Maxilla
2. Occipital
3. Atlas and axis
4. All of the above

1-13. The appendicular skeleton is composed of the bones of the

1. skull and vertebral column
2. thorax and vertebral column
3. pelvis and thorax
4. upper and lower extremities

1-14. The upper three ribs on each side are known as which of the following types of ribs?

1. True
2. False
3. Floating
4. Sternal

1-15. The head of the humerus is called the

1. scapula
2. acetabulum
3. glenoid falsa
4. epicordyle

1-16. The innominate bone is composed of three parts that are united in adults to form a cuplike structure called the

1. glenoid fossa
2. acetabulum
3. symphysis pubis
4. obturator foramen

1-17. The prominences easily felt on the inner and outer aspects of the ankle are called

1. medial and lateral malleolus
2. medial and lateral condyles
3. greater and lesser tuberosities
4. greater and lesser trochanters

1-18. Bones that develop within a tendon are known as which of the following?

1. Condyloid
2. Sesamoid
3. Vermiform
4. Falsiform

1-19. Moving an extremity away from the body is called

1. flexion
2. extension
3. abduction
4. adduction

1-20. The act of straightening a limb is known as

1. flexion
2. extension
3. abduction
4. adduction

1-21. The primary function of the muscles includes all of the following EXCEPT

1. providing heat during activity
2. maintaining body posture
3. producing red blood cells
4. providing movement

1-22. The ability of muscles to regain their original form when stretched is known as

1. contractiblity
2. elasticity
3. extensibility
4. tonicity

1-23. Actin and myosin are the two protein substances involved in

1. muscle recovery
2. muscle nourishment
3. muscle contraction
4. rigor mortis

1-24. Which of the following properties describes the ability of muscles to respond to a stimulus?

1. Contractility
2. Irritability
3. Extensibility
4. Tonicity

1-25. If a generally sedentary person in less than good physical condition enters a marathon with intent to complete the race, which of the following outcomes can he/she be expected to encounter?

1. If the day is cool, there will be no significant risk
2. Any physical deficiency can be overcome with a carbohydrate-rich diet before the race
3. If stretching exercises are performed before the race, he/she will be ok
4. He/she runs the risk of muscle damage

1-26. Intramuscular injections are frequently given in which of the following muscles?

1. Trapezius
2. Pectoralis majoris
3. Deltoid
4. All of the above

1-27. Intramuscular injections are usually given in which of the following muscles?

1. Quadriceps
2. Sartorius
3. Gastrocnemius
4. Gluteus maximus

1-28. The body's primary thermo-regulatory action is a function of dilating and contracting blood vessels and the

1. stratum germinativum
2. sweat glands
3. sebaceous glands
4. melanin

1-29. The total blood volume in the average adult is in what ranges?

1. 3 to 4 liters
2. 4 to 5 liters
3. 5 to 6 liters
4. 6 to 7 liters

1-30. A decreased red blood cell (RBC) count could be the result of a medical condition affecting the

1. compact bone
2. periosteum
3. yellow marrow
4. red marrow

1-31. Blood of the average female adult contains (a) how many million RBCs per (b) what unit?

1. (a) 4.5 (b) mm^3
2. (a) 6.0 (b) cm^3
3. (a) 4.5 (b) 1
4. (a) 4.5 (b) low power field

1-32. A white blood cell (WBC) count of 18,000 may indicate what condition?

1. Leukocytosis
2. Normalcy
3. Infection
4. Vetiligo

1-33. In an accident victim suffering from a fibrinogen deficiency, the rescuer may have difficulty performing which of the actions listed below?

1. Controlling hemorrhage
2. Immobilizing a fracture
3. Supporting respiratory function
4. Reducing a dislocation

1-34. In addition to preventing excessive blood loss, the formation of a blood clot serves which, if any, of the following purposes?

1. To convert fibrinogen into blood serum to aid healing
2. To form the foundation for new tissue growth
3. To manufacture leukocytes
4. None of the above

1-35. The valves of the heart include all of the following EXCEPT

1. atrial
2. mitral
3. tricuspid
4. pulmonary

1-36. Oxygenated blood is carried by which of the following vein(s)?

1. Inferior vena cava
2. Superior vena cava
3. Portal
4. Pulmonary

1-37. The contraction phase of the heart is

1. systole
2. tension
3. diastole
4. active

1-38. The pulse pressure is the difference between which of the following measurements?

1. Venous and arterial pressure
2. Resting and active pulse rate
3. Arterial and ventricular pressure
4. Systole and diastole

1-39. The venous system that carries digested materials from the intestinal tract is called the

1. portal
2. pulmonary
3. abdominal
4. pelvic

1-40. Lymph nodes participate in all of the following functions EXCEPT

1. manufacture of white blood cells
2. filtration of bacterial debris
3. production of hormones
4. collection of large protein molecules

1-41. Windpipe is another term for

1. nares
2. larynx
3. trachea
4. pharynx

1-42. The primary muscle of respiration is known as the

1. pleura
2. alveolus
3. diaphragm
4. mediastinum

1-43. Of the following nerves, which, if any, controls the larynx during the process of breathing?

1. Phrenic
2. Intercostal
3. Vagus
4. None of the above

1-44. A nerve cell, or neuron, is composed of all of the following EXCEPT a/an

1. synapse
2. axon
3. cyton
4. dendrite

1-45. The impulse receptors of a nerve are called

1. dendrites
2. Schwann cells
3. ganglia
4. neurons

1-46. The space through which a nerve impulse passes from one neuron to another is called a/an

1. myelin sheath
2. synapse
3. axon
4. ganglion

1-47. Balance, coordination of movement, and harmony of motion are functions of what part of the brain?

1. Cerebral cortex
2. Cerebellum
3. Pons
4. Temporal lobe

1-48. Circulation and respiration are controlled primarily from what area of the brain?

1. Medulla oblongata
2. Pons
3. Cerebellum
4. Cerebrum

1-49. The meninges, membrane layers covering of the brain and spinal cord, are composed of all of the following EXCEPT the

1. dura mater
2. pia mater
3. arachnoid
4. foramen magnum

1-50. In what part of the body is cerebral spinal fluid produced?

1. Ventricles of the brain
2. Spinal cord
3. Meninges
4. Medulla oblongata

1-51. The 12 pairs of cranial and 31 pairs of spinal nerves form what nervous system?

1. Peripheral
2. Central
3. Autonomic
4. Sympathetic

A. Facial
B. Trigeminal
C. Hypoglossal
D. Accessory

IN ANSWERING QUESTIONS 1-52 THROUGH 1-54, SELECT FROM THE LIST ABOVE THE CRANIAL NERVE THAT PERFORMS THE FUNCTION LISTED IN EACH QUESTION.

1-52. Controls the muscles of the tongue.

1. A
2. B
3. C
4. D

1-53. Transmits sensation of taste.

1. A
2. B
3. C
4. D

1-54. Receives sensory input from the face.

1. A
2. B
3. C
4. D

1-55. The autonomic nervous system is composed of two main divisions: the

1. pons and medulla oblongata
2. voluntary and involuntary systems
3. sympathetic and parasympathetic systems
4. cerebrum and cerebellum

1-56. Conservation and restoration of energy are the result of nerve impulses arising from which, if any, of the following nervous systems?

1. Sympathetic
2. Parasympathetic
3. Voluntary
4. None of the above

A. Sympathetic
B. Central
C. Peripheral
D. Parasympathetic

IN ANSWERING QUESTIONS 1-57 THROUGH 1-60, SELECT FROM THE LIST ABOVE THE NERVOUS SYSTEM THAT IS MOST RESPONSIBLE FOR THE SYMPTOM OR FUNCTION GIVEN IN THE QUESTION.

1-57. Increased heart rate.

1. A
2. B
3. C
4. D

1-58. Vision.

1. A
2. B
3. C
4. D

1-59. Decreases heart rate to normal.

1. A
2. B
3. C
4. D

1-60. Reflex arc.

1. A
2. B
3. C
4. D

1-61. Hormones secreted by the endocrine system are

1. secreted directly into the gland, tissue, or organ it influences
2. directed to the gland, tissue, organ by a duct system
3. secreted into the circulatory system
4. typically produced in large quantities

1-62. The overproduction of which hormone leads to acromegaly?

1. Somatotropin
2. Oxytocin
3. Gonadotropin
4. Thyroxin

1-63. Which of the following diseases is characterized by a deficiency of the antidiuretic hormone?

1. Myxedema
2. Diabetes insipidus
3. Hyperthyroidism
4. Addison's disease

1-64. An insufficient secretion of thyroxin is characterized by all of the following symptoms EXCEPT

1. weight gain
2. fatigue
3. profuse sweating
4. slowed heart rate

1-65. Calcium levels in the blood are controlled by which of the following hormones?

1. Thyroxin
2. Vasopressin
3. Oxytocin
4. Parathormone

1-66. Electrolyte balance is a function of the hormone produced by the

1. posterior lobe of the pituitary gland
2. anterior lobe of the pituitary gland
3. cortex of the adrenal gland
4. medulla of the adrenal gland

1-67. A metabolic response to epinephrine includes which, if any, of the symptoms listed below?

1. Decreased heart rate
2. Increased blood pressure
3. Respiratory distress
4. None of the above

1-68. What hormone is produced by the alpha cells of the islands of Langerhans in the pancreas?

1. Glucagon
2. Insulin
3. Norepinephrine
4. Androgens

1-69. The cornea is part of the protective outer layer of the eye called the

1. sclera
2. conjunctiva
3. choroid
4. crystalline body

1-70. The inner part of the eye derives its nourishment primarily from the vascular structure of what tissue?

1. Conjunctiva
2. Sclera
3. Vitreous humor
4. Choroid

1-71. Dilation of the pupil, a muscular response of the iris, normally occurs as a result of what?

1. Increased intensity of light
2. Decrease intensity of light
3. Irritation to the sclera
4. Irritation to the conjunctiva

1-72. Of the elements listed below, which makes seeing in the dark possible?

1. Rods
2. Cones
3. Iris
4. Choroid

1-73. By what process is three-dimensional vision produced?

1. Accommodation
2. Convergence
3. Refraction
4. Stimulation

1-74. The mechanical transmission of sound from the tympanic membrane to the inner ear is a function of which of the following?

1. Auditory ossicles
2. Eustachian tube
3. Bony labyrinth
4. Organ of Corti

1-75. What structure(s) of the inner ear provide(s) neural stimuli used to maintain equilibrium?

1. Fenestra rotunda
2. Fenestra ovalis
3. Semicircular canals
4. Organ of Corti